



U.S. Department of Transportation
Federal Transit Administration

Paul S. Sarbanes Transit in Parks Program (Transit in the Parks Program)
Project Proposal for Fiscal Year 2010 Funds – Implementation Project

BASIC PROJECT INFORMATION

Project Name (Please provide a 1-2 sentence description of the project):

Sustainable Transit in Reds Meadow and Devils Postpile National Monument

As the culmination of a decade of work between the Inyo National Forest, Devils Postpile National Monument, and the Federal Transit Administration, Eastern Sierra Transit Authority has assumed operation of the Reds Meadow Shuttle starting in 2009. This request for the purchase of buses will enable the long-term viability of this new partnership with ESTA.

Proposed Funding Recipient: Eastern Sierra Transit Authority

Public land unit(s) involved:
Inyo National Forest
Devils Postpile National Monument

Location of Project

City: Town of Mammoth Lakes
County: Mono
State: California
Congressional District: 19th and 25th

Federal Land Management Agency managing the above unit(s):

- ☐ Bureau of Land Management
☐ Bureau of Reclamation
☐ Fish and Wildlife Service
☒ Forest Service
☒ National Park Service
☐ Other (e.g. Federal Trust)

Describe:

Type of Implementation Project:

(Planning projects, please use the alternate form)

- ☒ Bus
☐ Vehicle replacement
☐ Tram/Trolley
☐ Boat/Ferry/Dock
☐ Rail
☐ Non-motorized (e.g., bicycling/pedestrian trail)
☐ Other (e.g., Intermodal facility, ITS)

Describe:

- ☐ Proposal is for a new alternative transportation system where none currently exists.
☐ Proposal is for an expansion or enhancement of an existing alternative transportation system.
☒ Proposal is for rehabilitation of or replacement of vehicles or facilities for an existing alternative transportation system.

Transit in Parks Program Funding Requested during FY 2010
\$3,200,000

Total Project Capital Cost at Completion (All sources)
\$4,800,000

Were you awarded Transit in Parks Program funds for this project in the past? ☒ Yes ☐ No
If answer "Yes," please provide amount awarded: \$1,600,000 – 1st phase of funding to purchase 12 new 35-passenger, handicapped accessible buses

Do you plan to request additional Transit in Parks Program funds in future years? ☒ Yes ☐ No
(Note: If you wish to compete for future Transit in Parks Program fiscal year funding you must reapply).

If answer "Yes," please specify Transit in Parks Program proposed funding levels for out years below:

FY 2010 \$	FY 2011 If project continues to receive phased funding, FY11 request will be for the remaining balance of the project	FY 2012 \$
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FY 2010 Funding Amounts from sources other than Transit in Parks Program funds? ☒ Yes ☐ No
If answer "Yes," please specify funding levels per source below:

State \$	Local \$	Federal (other than Transit in Parks Program) \$	Private sources \$395,000 (revenue from passenger fares)
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CONTACT PERSON

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OTHER PROJECT SPONSORS (in addition to funding recipient)

**Inyo National Forest
Devils Postpile National Monument**

REQUIREMENTS

- ☒ If a State, Tribal, or local government entity is proposing the project, the applicant has contacted the manager of the federal land unit(s) and has the consent of the Federal land management agency or agencies affected.
- ☒ The project is consistent with the metropolitan and statewide planning process.
- ☒ The project is consistent with agency plans.
- ☒ If this is an implementation project, all reasonable alternatives, including a non-construction option, were analyzed before proposing this project.

BASIC PROJECT DATA

Number of Visitors (Annual): 100,000 over 4 month season	Daily Number of Visitors (Peak season): Average of 2,000
Average Number of Vehicles per Day at Peak Visitation: 300 vehicles in the access limited Reds Meadow area (per Forest Order, the Reds Meadow shuttle has been the primary means of access during peak visitation since 1979); without the shuttle, expected vehicle use would exceed 1000 during peak visitation	
Current Road Level of Service at Peak Visitation: Estimated Level of Service at Peak Visitation is Level B with "mandatory" shuttle service. Without the shuttle LOS would be Level F based on unrestricted traffic on a steep and curvy one lane road with pullouts.	
What time of the year does your land unit experience Peak Visitation? <input type="checkbox"/> Spring <input checked="" type="checkbox"/> Summer <input type="checkbox"/> Fall <input type="checkbox"/> Winter	
Current Carrying Capacity of Existing Roads: Safe carrying capacity of existing one lane road is up to 650 vehicles per day under idealized conditions. Reds Meadow Road is a one-lane, spur road that has had peak visitor traffic demand far in excess of its carrying capacity since 1979, when shuttle bus service was established as the primary mode of access to accommodate growing visitation, safely and	

efficiently.

Current parking shortages during peak visitation:

Total number of parking spaces: 185

Total number needed at peak visitation: 500.

Parking is a key limiting capacity factor and cannot be meaningfully increased due to geographic constraints and without adversely impacting natural resources and degrading recreation opportunities.

Current Average Number of Persons who use the alternative transportation system (if one already exists) at Peak Visitation:

Average: 800; Max: 1,600 (average number of visitors/daily at peak)

Current Annual Number of Persons who use the alternative transportation system (if one already exists): 64,000, or 80% of visitors during shuttle operation season (anticipated number of riders or users/annually)

Estimated Annual Number of Persons who will use the alternative transportation system at project completion: 64,000 (anticipated ridership/usage)

Is there an anticipated reduction in auto collisions with large animals with this project?

☒ Yes ☐ No

If "Yes," please provide anticipated reduction: 10 collisions/year

BASIC PROJECT DATA (CONTINUED)

Is there an anticipated increase in porous surface with this project? ☐ Yes ☒ No

If "Yes," please provide anticipated area of increase: square feet

Is there an anticipated increase in wildlife habitat connectivity? ☐ Yes ☒ No

If "Yes," how many acres would be connected by the project? acres

Is there an anticipated increase in air clarity measures (e.g., visitors' visual experience) for the land unit as a result of this project? ☒ Yes ☐ No

If "Yes," please explain: The Reds Meadow/Devils Postpile Shuttle reduces the numbers of private vehicles driven into the valley and associated exhaust emissions. The area is a designated Class I (pristine) airshed that is in non-attainment status under Clean Air Act, so it is important to continue to limit the number of vehicles in the valley, and to minimize shuttle bus emissions by acquiring low-emission buses that meet or exceed EPA and California emissions standards. Since the 2009 season, buses used in providing the Reds Meadow shuttle have been leased and do not meet the more stringent emissions standards imposed on newly manufactured buses to be acquired under this project. The shuttle is credited with reducing greenhouse gas emissions by 250 tons compared to having visitors operate their own vehicles.

Is there an anticipated reduction of visual impact of parking and roads on visitor experience?

☒ Yes ☐ No

If "Yes," please explain: Continuation of the shuttle system reduces vehicle trips and prevents roadside parking in undesignated areas.

Is there an anticipated reduction of visual or noise impacts of transportation facilities on visitor experience?

☒ Yes ☐ No

If yes, please explain: Quieter buses with large windows will improve the overall visitor experience. And, continuation of the shuttle system reduces private vehicle trips and associated visual and noise impacts.

Executive Summary

The Inyo National Forest, Devils Postpile National Monument, and Eastern Sierra Transit Authority (ESTA) request \$3.2 million from the Paul S. Sarbanes Transit in the Parks program to complete the purchase of 12 new buses for the Reds Meadow/Devils Postpile Shuttle service. Four of these buses will be purchased with the FY09 TRIP award, and this year's request is to purchase the remaining 8 buses.

In the spring of 2010, the independent consulting firm David Evans and Associates, which has a long and successful history of working with transit on federal lands, completed a technical memorandum about the Reds Meadow/Devils Postpile Shuttle Service. Their summary: "The results of the overall operational and financial assessment indicate that continuing the current partnership arrangement and seeking a government grant for the purchase of buses is the recommended approach for the delivery of shuttle bus service for the Reds Meadow area of Inyo National Forest and Devils Postpile National Monument."

The true nature of this proposal is that **completing this bus purchase is the lynchpin to developing a multi-agency partnership** that will support transit visitation to our public lands twelve months a year for almost 900,000 riders. The National Park Service and the Inyo National Forest have worked closely together for 30 years to provide the Reds Meadow/Devils Postpile Shuttle Service. The Forest Service and NPS expanded this transit partnership last year to include Eastern Sierra Transit Authority (ESTA), which operated the Reds Meadow Shuttle in 2009. The momentum initiated by the new NPS, USFS, and ESTA partnership is toward a new, even larger multi-agency transit partnership that incorporates all the transit operations in the Eastern Sierra.

The lasting benefit of this partnership will be the opportunity to **leverage significant financial and professional resources** from the partners to support the long-term sustainability of the Reds Meadow Shuttle and rural transit in the Eastern Sierra. The partners bring major on-going support for operations, maintenance and vehicle replacement, enabling this bus purchase to be the seed money that will catalyze the multi-agency partnership and a self-sufficient transit operation.

Throughout the 30-year history of the Reds Meadow Shuttle Service, the Forest Service and National Park Service have struggled mightily to make it viable, and have only barely succeeded as a result of regular infusions of appropriated dollars and grant monies. The only realistic solution to move beyond this model and **ensure the long-term viability and sustainability of the Reds Meadow Shuttle** is to move toward a long term, multi-year operation. Providing the up-front capital to purchase buses is the necessary catalyst to bring this larger, multi-agency partnership to fruition and it is the only way the Forest Service and Park Service can make a multi-year commitment to this partnership.

The analysis in the Technical Memo indicates that purchasing buses is **the most cost-effective and operationally appropriate option over the long run**. It is extremely difficult to consistently lease buses appropriate for the rigors of the Eastern Sierra, and relying on leased buses exposes the Forest Service and its visitors to dramatic swings in year-to-year costs, jeopardizes the multi-agency partnership that brings significant financial and professional resources to the operation, and risks the eventual shut down of the Reds Meadow shuttle. In the context of a fully funded, year round, multi-agency transit partnership that serves 900,000 visitors to public lands every year, a continued investment of \$3.2 million is nominal. Completing the purchase of buses now greatly supports rural transit in the Eastern Sierra by taking the first steps toward a seamless regional transit system.

The conclusion to the Technical Memo: "The Reds Meadow shuttle service is an effective means to reduce traffic congestion, overflow parking and related resource impacts in a very popular visitor use area with limited access by road and a constrained supply of parking. The service allows many more visitors to enjoy the unique features of the area than would be possible with access by private vehicles alone. The partnership arrangement with ESTA has proven to be a successful approach to providing high quality service to visitors at an affordable cost. Continuing the partnership with ESTA and providing new vehicles appropriate for use on the road and tailored to providing a high quality park experience is recommended as the best approach to retaining this critical visitor use and resource protection amenity."

Project Description

What activities would be funded by the requested Transit in Parks Program financial assistance? Please provide a project description that is no more than one page in length. You may attach up to two pages of maps or other illustrations that do not count towards the page limit.

The Inyo National Forest, Eastern Sierra Transit Authority (ESTA) and the Devils Postpile National Monument request \$3,200,000 from the Paul S. Sarbanes Transit in the Parks program to pay for the purchase of up to 8, 35-passenger, handicapped accessible buses. Along with the FY09 TRIP award for the purchase of 4 vehicles, this request will complete the rolling stock needs for Reds Meadow/Devils Postpile Shuttle operation. ESTA began operations of this system in 2009 through its authority as a Joint Powers Authority and as the federally recognized transit authority for the region. This project is the culmination of decades of work between the partners, with significant support from Federal Transit Administration.

The Reds Meadow Valley is located in the upper Middle Fork of the San Joaquin River basin, in the Sierra Nevada Mountains of California, on the Mammoth Ranger District of the Inyo NF. Access to the area is along the scenic Highway 395 corridor through the Town of Mammoth Lakes, approximately 45 miles north of Bishop, California, and approximately 180 miles south of Reno, Nevada.

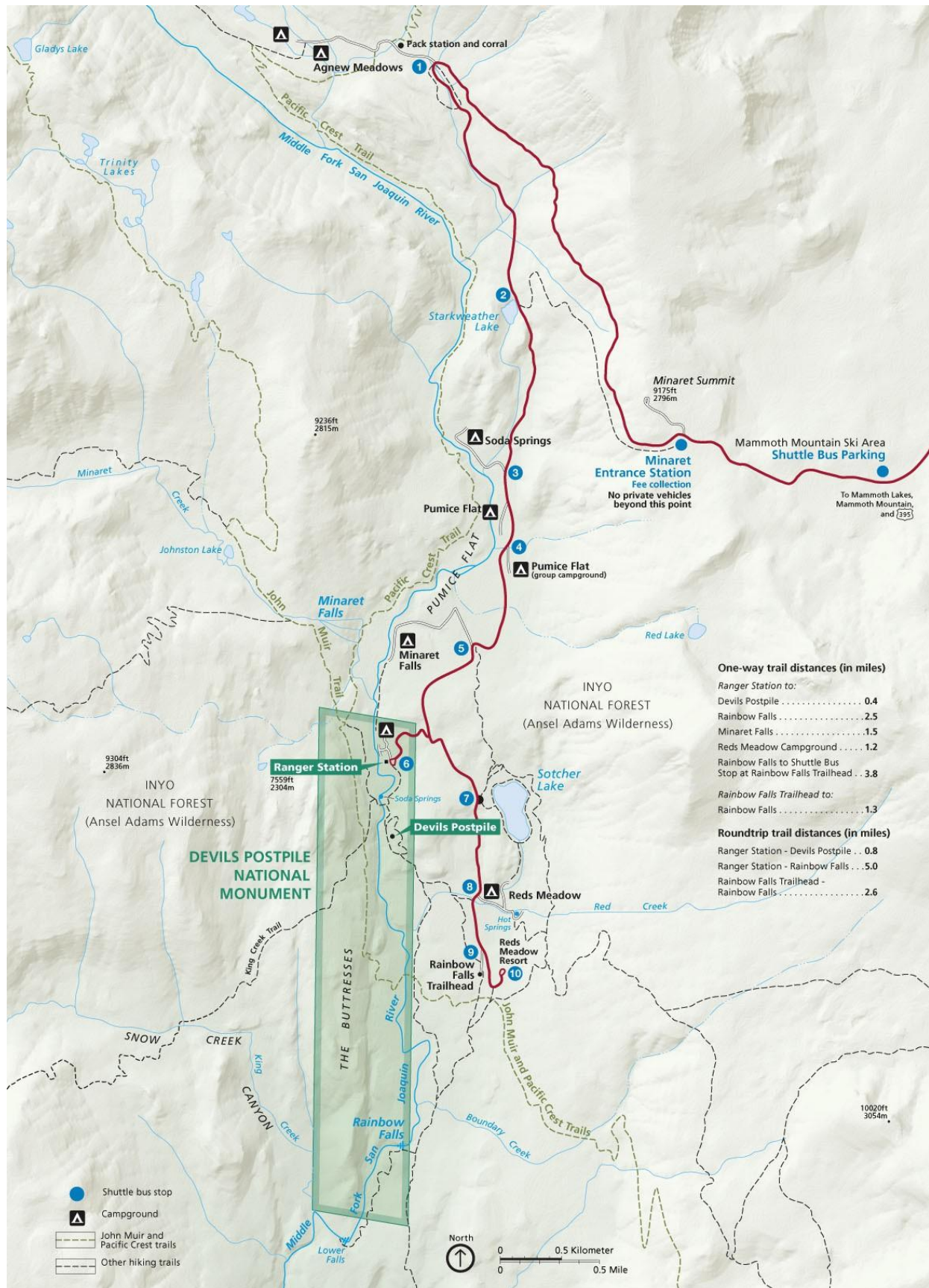
The Reds Meadow road is the only route for vehicle access to the Reds Meadow Valley, Devils Postpile National Monument, and six trailheads leading into the John Muir and Ansel Adams Wilderness areas, including the Pacific Crest Trail and John Muir Trail. The road also provides access to four nature trails, two day use lakes, two commercial Pack Stations under permit, and 186 campsites distributed across six campgrounds. There are only 185 parking spots for the 2,000 daily visitors. From June to October when the Reds Meadow is accessible, over 100,000 people visit the valley. The valley is inaccessible to motor vehicles due to snow the rest of the year.

The Reds Meadow Shuttle has been in operation for 30 years and was implemented when the Forest Service limited vehicle access to the Reds Meadow Valley. The vehicle restriction resulted from degradation of the valley's natural resources and safety concerns, caused by motor vehicle use above the valley's capacity. In the 30 years since the order, the ecological health of the valley has been on an upward trajectory due to the vehicle restriction and shuttle service. The shuttle has also limited the need for building additional parking, significantly reduced the impacts of personally-owned vehicle travel into the valley, and successfully avoided any major collisions along the steep and treacherous access road.

In 2008, about 1,200 passengers rode the shuttle each day of operation during peak season. During the 3 months of operation, 64,000 passengers rode the Reds Meadow shuttle. Ticket prices have been \$7/adult and \$4/children for unlimited rides on one day for the last six years, and are expected to stay the same in the future. Total visitation is higher than shuttle ridership because the shuttle does not operate the entire time the valley is accessible, and there are limited exceptions to the vehicle restriction.

Throughout the 30-year history of the Reds Meadow Shuttle Service, the Forest Service and National Park Service have struggled to make it viable, and have only barely succeeded as a result of regular infusions of appropriated dollars and grant monies, including TRIP awards. Because of these challenges, this shuttle service has been the subject of eight studies over the last seven years. These studies all laid the groundwork for identifying an environmentally compatible, financially sustainable, ADA compliant, long term solution for the Reds Meadow Shuttle, which led to partnering with ESTA and this request for purchasing buses. ESTA was formed in 2007 and does not have sufficient rolling stock to operate the shuttle.

This request is for 8, 35 passenger, low floor, ADA-accessible buses that ESTA will use to operate the Reds Meadow Shuttle. The 2010 Technical Memo by David Evans and Associates identified the grant-funded purchase of buses for this operation as the most cost-effective and operationally appropriate option over the long run and the best way to ensure the long-term viability of the Reds Meadow/Devils Postpile Shuttle operation.



Transit in Parks Program Implementation Evaluation Criteria

Your responses to these questions must total no more than eight pages.

1. Demonstration of Need

As the culmination of a decade of work between the Inyo National Forest, Devils Postpile National Monument, and the Federal Transit Administration, Eastern Sierra Transit Authority has assumed operation of the Reds Meadow Shuttle starting in 2009. This has initiated the beginning of a sustainable model for one of the longest running transit operations on federal lands. In order to ensure the long-term viability of this new partnership with ESTA, and to avoid the need for annual implementation grant support, this request for completing the purchase of rolling stock is necessary.

a. Visitor mobility and experience:

The Reds Meadow Valley shuttle service has been very well studied. In the last seven years, multiple efforts have analyzed different aspects of the shuttle service:

- 2003/2004 Eastern Sierra Expanded Transit System Report by Cambridge Systematics
- NPS Transportation Assistance Group Report, 2004
- NPS Transportation Scholar Report, 2004
- FTA funded Transportation Study by BMI-SG, 2005
- FTA Transportation Assistance Group Report 2007
- NPS Transportation Scholar Report 2007
- Reds Meadow/Devils Postpile Case Study by VHB, 2007
- Feasibility Report by the Volpe Center/David Evans and Associates, completed 2010

In addition to these studies and reports, the National Park Service conducts annual visitor surveys and in 2006, they conducted an in-depth visitor study in partnership with the University of Idaho. The data used throughout the rest of the application are from these reports and studies.

The Reds Meadow Shuttle system is vital to managing visitation and protecting natural resources in the Reds Meadow Valley and Devils Postpile National Monument. There are two primary transportation problems that the Reds Meadow Shuttle Service addresses: access and parking. The only road into the Reds Meadow Valley and Devils Postpile National Monument is a steep (up to 13% grade) and narrow road with sharp curves that create blind corners; in many places during the descent, the road is only one lane wide with a precipitous dropoff to the valley floor below. Once in the Valley, there are only 185 parking spaces dispersed across the six trailheads, two day-use lakes, and the Devils Postpile National Monument. For the protection of the fragile valley ecosystem and to preserve water quality, the Inyo NF and Devils Postpile NM have decided that adding more parking is not a viable option.

Increasing Access

The shuttle system increases the accessibility of the valley to persons with disabilities and those without cars. With ESTA assuming operations in 2009, the Reds Meadow Shuttle will also be directly linked to the existing transit systems in the Town of Mammoth Lakes and the region. As a result, it will be easy for visitors to access Reds Meadow Valley and the Devils Postpile from Reno, Merced, or the Los Angeles area without a private vehicle. In the past, the 4 mile break in transit service between Mammoth Lakes and the beginning of the shuttle route made Reds Meadow virtually inaccessible for those relying on mass transit.

Purchasing new buses also increase access for persons with disabilities. Visitors with disabilities will have the option of either riding the shuttle or driving their personal vehicle into the valley. For those that choose to drive in, the shuttle system limits the number of cars accessing the valley, ensuring adequate parking close to the attractions and again, minimizing the need for walking for mobility-impaired visitors.

Parking Shortages

Traffic congestion and parking concerns have been greatly reduced since the Reds Meadow Shuttle was implemented in 1979. Shuttle ridership is estimated to reduce vehicular traffic by up to 500 roundtrips daily during peak use periods. (Note: all trips are roundtrip in and out on Reds Meadow Road, so all vehicle trips in this discussion are presented as roundtrip figures.) There are only 185 parking spaces throughout the valley. Without the shuttle, accommodating the current level of visitors would result in 900 to 1,200 vehicle roundtrips/day and require the turn-over of every parking spot, on average, every 90 minutes. The current average visit is 3.5 to 4 hours. Given daily peak morning and afternoon traffic periods, up to three quarters of the existing peak day visitors could not be accommodated without the shuttle.

Traffic congestion, traffic delays, and visitor frustration

The 2005 FTA (BMI/SG) Transportation Study analyzed the impacts on visitation if the shuttle system were discontinued. Without the shuttle system, there would be a 50% overall decrease in the number of visitors, or unacceptable traffic congestion, traffic delays, parking shortages, difficulty in accessing destinations, and safety issues related to traffic.

b. Environmental condition as a result of the existing transportation system:

This request for purchasing new vehicles will help protect the fragile, alpine ecosystem of the Eastern Sierra. Because of the demanding duty cycle of the Reds Meadow Valley route, past contractors have had difficulties with shuttles leaking fluids throughout the valley, and with finding a proper location for maintenance. The new partnership with ESTA, and this request for new vehicles, will ameliorate these challenges. ESTA has access to local, top-notch maintenance facilities and the vehicles that will be purchased with this application, if successful, will be able to handle the rigors of the Reds Meadow road without environmental damage. In addition, the new buses will also meet strict emissions standards that existing buses do not.

Absent the shuttle, the natural environment, air quality, and wildlife along the Reds Meadow Road, at Devils Postpile National Monument, and in Reds Meadow Valley would be adversely impacted by 23,000 more vehicle roundtrips per season. Prior to the shuttle, the valley was gridlocked and became a parking lot, with cars parked on roadside vegetation wherever they could find room to pull off the road. In 1979, the Forest limited personal vehicle access to the valley and initiated the shuttle system. The shuttle system has removed the need for almost 23,000 vehicle roundtrips within the Reds Meadow area each season, significantly reducing impacts to vegetation, wildlife habitat, and improving air quality.

The shuttle system eliminates approximately 500 vehicle roundtrips per day or 10,000 vehicle miles traveled per day, reducing emissions and improving air quality. With the shuttle system, there is sufficient parking space so vehicles no longer need to park along roads on vegetation. Fewer vehicles result in fewer collisions with animals and the shuttle buses keep speeds slow, also decreasing animal fatalities.

2. Visitor Mobility and Experience Benefits

a. Reduced traffic congestion:

The Reds Meadow Shuttle provides access to the valley for approximately 75% of visitors during peak day operations. On average 65% of all visitors access the valley via the shuttle system when in operation. The shuttle allows for a much higher level of public visits than a private vehicle based alternative. Without the shuttle, accommodating the current levels of public visitation isn't feasible and would result in an increase in vehicle trips even at drastically reduced visitation levels. There are currently 185 parking spots in the valley and the Inyo NF and Devils Postpile NM do not consider increasing parking a viable alternative. The average visitor stay in the valley is 3.5-4 hours, and the elimination of trailhead parking due to longer visitor stays results in an average turn-over per parking spot of 1.5 to 2 times per day. We estimate only 100 out of 185 parking spots typically turn over in a day. This suggests a maximum valley

carrying capacity of 280 to 380 vehicles per day, numbers consistent with current peak day visits with the shuttle.

	Peak Day Private Vehicle Roundtrips	Annual Private Vehicle Roundtrips
5-year Average 2001-2006 (65% of visitors arriving by shuttle)	300	14,500
Projected Trips (100% of visitors arriving by private vehicle)	800	37,500

Without the shuttle bus, the Level of Service rating of the Reds Meadow access road without the shuttle would be an F, and approximately 400 to 500 vehicles would be unable to find parking in the valley, be turned away, or have to park along roadsides, impacting vegetation, water quality, and visitor safety. Our studies have shown average vehicle occupancy of 2.4 people, meaning loss of the shuttle would effectively reduce access to the valley by 900-1,200 visitors during peak periods.

b. Enhanced visitor mobility, accessibility, and safety:

The Inyo NF and Devils Postpile NM are sensitive to the impacts that a transit fare can have on lower-income families and have worked hard at keeping the fare as low as possible. A key finding from the Technical Memo by David Evans and Associates demonstrates the importance of this bus purchase request at maintaining affordable fares. If ESTA is forced to continue to lease buses, the cost per passenger could rise as high as \$10.02. With the TRIP funded purchase of 12 buses, the cost per passenger is estimated to be only \$6.21.

With the new partnership with ESTA, the Reds Meadow Shuttle will be directly linked to the adjacent community of Mammoth Lakes and its 30,000 lodging beds and three fixed transit routes. In the past, there was a 4 mile gap in transit services. In addition to linking Mammoth Lakes visitors to the Reds Shuttle system, this new connection links the Reds Shuttle to other ESTA regional services to Reno or the Los Angeles area, and YARTS service to Yosemite Valley and Merced, CA, creating a truly regional, seamless transit system supporting visitation to public lands. The benefits for people without cars or who choose to leave the car at home are significant.

Purchasing new buses for the shuttle will enhance access for persons with disabilities. A limited number of specially equipped buses have been used in the past to meet accessible transportation needs; however the majority of service was provided with high-floor buses that are not optimally suited to shuttle operation or to older visitors and/or families with young children that have difficulty negotiating steep stairs. New shuttle buses being considered are low floor models with ADA-compliant ramps, which provide convenient ingress/egress for the disabled, seniors, and passengers with mobility limitations, such as parents with young children. As is currently the case, persons with disabilities also retain the option of using their personal vehicle to access the valley when it would enhance access opportunities.

Almost 1,200 visitors a day benefit from the existing shuttle system, totaling 64,000 during its three months of operation. Many hikers in the valley choose to hike one way routes (starting at one trailhead, finishing at another), knowing they can catch the shuttle at any trailhead and many overnight campers opt to leave their vehicle parked and take the shuttle to visit other destinations within the valley. These opportunities are highlighted on a customized [Google Map](#).

Visitor Safety

Purchasing new buses that can be tailored for the rigors of the Reds Meadow access road will also improve safety. Past buses used for the Reds Meadow shuttle were not always configured for repeated use on the steep access road, including a transmission geared for steep descents and a retarder-equipped transmission. While there have not been any incidents as a result of inappropriate buses, there is no reason to continue taking these risks.

The Reds Meadow Shuttle service significantly improves the safety for visitors. The characteristics of the access road limit the number of vehicles that can *safely* use the road, particularly if two or more large vehicles (RVs, vehicles towing trailers) meet head-on at points with no pullouts. Visitation is usually concentrated during the mid-day hours and even the 300 daily vehicles tax the capacity of the road. The 2010 David Evans and Associates Technical Memorandum states that vehicle passing occurrences are reduced by 1,500 per day on average, and up to 14,400 on peak days, which reduces the risk of accidents. Without the shuttle, studies have predicted over 800 vehicles would access the valley; on holiday weekends, vehicle usage would likely exceed 1,000 per day without the shuttle. The road would have an 'F' Level of Service on the road, and visitors would have to park along roadsides. It is apparent that without a shuttle bus system, there would be gridlock, increased accidents, and intense driver anxiety and frustration.

With the shuttle system in place, there have been very few vehicle accidents in the Reds Meadow Valley. Not only does the reduction in vehicle trips increase the safety, but access by large private vehicles (RVs, trucks with trailers) is further managed to increase safety through coordination with shuttle buses. Shuttle bus drivers know where to pull over, allowing room to pass each other safely. Motor homes and campers are advised to follow buses so they can safely maneuver down the road without incident.

c. Visitor education, recreation and health benefits:

The grant-funded purchase of buses supports the long term sustainability of ESTA's operation of the Reds Meadow Shuttle service, which is essential to continuing to have significant, positive impacts on visitors. With a grant-funded purchase of buses, ESTA will be able to use farebox revenues to increase interpretation on the buses, significantly enhancing the visitor experience. Additionally, the Inyo NF is expecting administrative and operating costs to decrease with ESTA as a partner and will instead be able to direct these funds to improving the visitor experience through amenity improvements throughout the Reds Meadow Valley, including accessible trails and interpretive signage. All 100,000 summertime visitors to the valley will benefit from these improvements.

The new shuttles will facilitate interaction between visitors and rangers or drivers and improve the visitor experience even more. With bus ownership, ESTA will be able to make modifications to the bus to support interpretation on the buses by adding on-board passenger information systems.

The shuttle service provides many education, recreation and health benefits to Reds Meadow visitors. Purchasing tickets and riding the shuttle provide multiple contact opportunities with visitors to share important safety and education messages for visiting Reds Meadow Valley. The contact opportunities also provide visitors with multiple chances to ask about recreation opportunities. The NPS 2006 Visitor Study shows that the visitor experience is greatly enhanced by the shuttle service. Almost a quarter of respondents said the shuttle improves their hiking experience, over a quarter of respondents indicated that it improved their park experience, and a third said the shuttle increases safety.

The social benefits of visitors enjoying a beautiful natural environment with safe and hassle free access are both tangible and intangible. Annual NPS Visitor Survey Cards distributed since 2000 consistently show satisfaction with the shuttle service ranging from 92-99%. Satisfied visitors return and spend time in local gateway communities, enhancing community economic health. Intangible benefits include the community nature of riding a shuttle; it is very common for neighbors on the shuttle to strike up conversations during the ride, which could not happen in individual vehicles.

3. Environmental Benefits

a. Protection of natural, cultural, and historic resources:

The Reds Meadow Shuttle reduces the number of private vehicles accessing the valley while still allowing visitors to experience the natural beauty and quiet of the area. Although a precise carrying capacity of the valley has not been identified, key components used to measure carrying capacity are functioning

with the current system. In fact, the ecological health of the valley has recovered sufficiently enough that the Devils Postpile NM is involved in a study that will likely identify the Reds Meadow Valley as a biorefugium for wildlife as the climate warms. Additionally, there is no expectation of a significant increase in visitation due to this proposal.

Visitation to the Inyo NF is expected to increase by 96,000 visits annually through 2025 and visitation to the adjacent gateway community of Mammoth Lakes is projected to continue to grow from a current peak of 35,000 people at one time to as many as 50,000 people at one time within the next few years, heightening the importance of maintaining a functional and sustainable transportation system.

Eliminating the shuttle would impact the natural environment, air quality, and wildlife in Reds Meadow Valley by increasing vehicular traffic from approximately 300 peak day vehicle roundtrips to over 800 vehicle roundtrips per day during peak operating season. Increasing the number of personal vehicles in the valley would lead to either increased parking along the roads or more parking lots. More parking along roads would see a concomitant increase in impacts on vegetation, soil compaction, and decrease in water quality; building more parking lots would have significant effect by clearing forests and destroying habitat, increasing impervious surfaces, and negatively affecting water quality and the visitor experience. Increased numbers of vehicles would also lead to an increased likelihood of animal collisions. The Middle Fork of the San Joaquin River flows through Reds Meadow Valley and is a drinking water source for many downstream communities.

b. Reduced pollution:

Purchasing new buses will help reduce air pollution in the Reds Meadow Valley. The ultra-low sulphur clean-diesel engines in the new buses will produce far less pollution than the engines in the buses currently used for the service. The Reds Meadow/Devils Postpile area is a designated Class I (pristine) airshed that is in non-attainment status under the Clean Air Act. It is important to continue to work at reducing air pollution in the valley by minimizing shuttle bus emissions. Starting with the 2009 season, buses used in providing the Reds Meadow shuttle were leased and do not meet the more stringent EPA and California emissions standards imposed on newly manufactured buses. The leased buses will be as old as 13 years old. EPA estimates that new buses will reduce non-methane hydrocarbon and nitrogen oxide emissions by 93% and particulate matter by 80% compared to the older leased buses.

The Reds Meadow Shuttle reduces vehicle miles traveled significantly. Last year, 64,000 visitors rode the shuttle, instead of driving the 19 mile roundtrip. The table below shows the impact of the shuttle system on reducing vehicle trips, vehicle miles traveled and CO_{2e} (carbon dioxide equivalent) emissions if all 64,000 had traveled into the valley by private vehicle.

Average number of shuttle riders	Avoided vehicle trips (2.4 passengers/vehicle)	Avoided vehicle miles traveled	Avoided emissions (lbs CO_{2e})
64,000	26,667	506,673	603,912

In addition to significantly lowering CO_{2e} and other auto-related pollutants, the shuttle system also helps to preserve a pristine soundscape. Standing on the Devils Postpile, it is possible to hear only the sounds of the forest, and not hear any motorized vehicle despite the 2,000 daily visitors. Increasing vehicle usage from 300/day to 800/day would significantly impact the existing soundscape of the valley.

4. Operational Efficiency and Financial Sustainability

a. Operational Efficiency:

Many of the studies of the Reds Meadow shuttle system have evaluated alternatives to the shuttle system, including opening access to all with no shuttle, a cap on vehicles in the valley (with one-out / one-in operations once the cap is reached), and a reservation system. Every study has concluded that a shuttle system is the best alternative for ensuring high visitor accessibility to the valley while still protecting the fragile ecosystem and protecting visitor safety.

The new partnership with ESTA and the purchase of new buses adds significant operational efficiencies to the Reds Meadow Shuttle system. They will help avoid the challenges and costs with leasing buses, provide significant safety improvements, and have a lasting, positive impact on visitor experiences. The Technical Memo by David Evans and Associates indicate that purchasing buses is a better long term option for shuttle operations, rather than leasing. As outlined in the David Evans and Associates Technical Memo, there are many challenges that come with leasing that indicate it is not a sustainable option for the Reds Meadow shuttle operation. These challenges include:

1. It is extremely difficult to find a source for a 3-4 month lease, especially during the summer. Leasing companies are primarily interested in long-term leases, and summer is also the peak demand time for buses, making leasing during this season extremely difficult. The remote location of the Reds Meadow operation does not make this any easier.
2. Because of the extreme challenge in finding a short-term lease, it is even more difficult to be particular about the type of bus and its safety features. If the access to Reds Meadow was a straight and flat road, this would not be a concern. However, the access road is very steep with sharp curves and requires buses that can handle this safely; buses should include a retarder-equipped transmission and transmissions should be geared to handle the steep grade. In previous years, inappropriate buses used by contractors have caused significant damage to the road, had challenges working at high altitudes, had problems making some turns, and had problems with leaking hydraulic fluid.
3. Ridership, and the fares collected from riders, is relatively consistent year to year. However, the challenges already outlined with leasing demonstrate that leasing costs will be very unpredictable and make it hard to ensure the operation does not lose money in the long term. David Evans and Associates estimated potential lease costs to be about \$217,000. Purchased buses adds a significant level of predictability when it comes to long term planning for this operation, which is vital for keeping bus fares low and sustaining the operation.
4. Not only are the leasing costs unpredictable, they also would be higher than a grant-funded purchase of buses. Avoiding leasing costs would enable either a reduction in passenger fares or at least the ability to maintain current fares for many years. This will help keep the shuttle experience affordable and accessible.
5. The lease with Mammoth Mountain Ski Area (MMSA) for the 2010 operating season is not a long-term solution. The current MMSA buses are older and need to be replaced soon; they are also not wholly appropriate for the conditions of the Reds Meadow access road. Relying on a lease with MMSA gives this large corporation significant leverage when it comes to negotiating new leases. And importantly, MMSA wants to improve its operations and efficiency and is in the early stages of working with ESTA to explore the opportunity to transfer operations from MMSA to ESTA.

In addition to the addressing the challenges with leasing listed above, purchasing buses brings other significant advantages.

1. The buses that would be purchased with this grant application will be selected based on their ability to both handle the challenges of the Reds Meadow access road and serve the needs of the MMSA winter operation. Adding the additional 8 buses to ESTA's fleet moves ESTA one step closer to having the capacity to assume MMSA's winter operations; this is in the best interests of the Inyo National Forest, Eastern Sierra residents, and the taxpayer. The MMSA winter shuttle system is the largest transit operation in the Eastern Sierra and if it is operated by ESTA, it will strengthen ESTA's capacity to provide high quality services to public lands throughout the Eastern Sierra. These could include some of the trailhead shuttles currently under study, funded by the Transit in the Parks program.
2. If ESTA owns the buses, it will be easier to make any mechanical adjustments to the buses to ensure they operate efficiently and safely on the challenging access road. These include:
 - a. A retarder-equipped transmission to handle the steep grade
 - b. A transmission geared for the steep grade
 - c. Seating arrangement designed to maximize efficiency and safety
 - d. ADA accessibility features

3. In addition to mechanical adjustments, ESTA will be able to add visitor amenities to the buses if they own them. These amenities could include bike racks, space for backpacks, picnic baskets, fishing rods, etc., and an onboard passenger information system to enhance the passenger experience and education opportunities.

Purchasing buses will also help sustain the new partnership with ESTA, which has additional benefits for visitors. Under the previous contractor-run shuttle service, visitors to the Reds Meadow Valley and Devils Postpile NM were cumulatively paying \$400,000-\$550,000 a year for the shuttle service, contract oversight, and fare collection and processing. Visitors were extremely supportive of this system, with over 92% supporting the shuttle operations. However, in the first year of the ESTA partnership, the Inyo NF received \$130,000 of this money to increase the interpretive and recreation experience of visitors. One anticipated benefit of this partnership will be the freeing of staff time from contract oversight, fare collecting and processing, and other general administrative tasks required of the operation. Instead, this time and money will be spent on improving recreational amenities and providing increased interpretation in the Reds Meadow Valley.

b. Feasibility of Proposed Budget:

	FY 2010	FY 2011	FY 2012	FY 2013
Revenue				
Transit in Parks Program funding (requested)	\$3,200,000			
Funds from public land budget				
Other federal funds				
State funding				
Local funding				
Passenger Fares and/or transportation fees	\$360,000	\$363,000	\$367,000	\$370,000
All other dedicated sources of funding		\$12,000		
<i>Total Revenue</i>	\$3,560,000	\$375,000	\$367,000	\$370,000
Capital Costs				
Purchase of rolling stock (vehicles)	\$3,200,000			
Lease of rolling stock (vehicles)	\$85,000	\$90,000	\$60,000.00	
Construction (e.g., bus shelters, sidewalks, trails, etc.)				\$30,000
Rehabilitation				
Other: _____				
<i>Total Capital Costs</i>	\$3,285,000	\$90,000	\$60,000	\$30,000
Operating Costs				
Salaries	\$208,000	\$215,000	\$224,000	\$233,000
Routine Maintenance			\$10,000	\$31,000
Insurance	\$16,000	\$17,000	\$18,000	\$19,000
Fuel	\$51,000	\$53,000	\$55,000	\$57,000
Contracted services				
Other: _____				
<i>Total Operating Costs</i>	\$275,000	\$285,000	\$307,000	\$340,000

Proposed budget narrative:

This budget includes the \$3,200,000 request and bus purchase in FY2010. However, it is not expected that buses will actually be purchased and delivered until the FY2013 season. To fill the need for the buses in FY2010 to FY2013, ESTA will lease buses from MMSA and this cost is reflected in the budget – this lease includes maintenance. In FY2012, ESTA is expected to have purchased 4 buses from the FY2009 TRIP award, which reduces the leasing costs.

Even though 2009 saw a spike in revenue, the prediction for revenue in 2010 reflects the average of the last 4 years of \$360,000, then increases 1% a year thereafter. All other expenses are expected to increase approximately 4% per year. In FY2011, ESTA will use a portion of the FY2009 surplus to support the transit system (\$12,000). In FY2013, the construction budgeted amounts will be used to improve the bus stops in Reds Meadow Valley. Many of the stops now lack even the most basic amenities, such as benches and trash containers.

The FY2010 request of \$3,200,000 is for the purchase of 8 new 35-passenger clean-diesel buses and builds on the FY2009 TRIP award that will be used to purchase 4 buses. The David Evans and Associates Technical Memo identified a need for 14 buses to meet current and expected demand at peak periods if using 35 passenger buses. However, this analysis did not take into account the potential for riders to stand during peak periods nor did it include the limited existing rolling stock that ESTA will be able to mobilize during peak periods. With these additional factors, 12 new buses will be sufficient to meet current and expected demand during peak visitation.

Based on research in June 2010, the current cost of a 35 passenger bus, plus the 2 years of inflation before funds will be disbursed and obligated, is approximately \$400,000. This price includes the necessary adjustments to ensure safe operation on the Reds Meadow Road, including a retarder equipped transmission for the steep road grade, ADA accessibility features, and a transmission geared for the steep grade. Diesel buses are the only viable option for the Reds Meadow shuttle system. The steep grade of the access road precludes hybrid buses and there are no CNG or other alternative fueling facilities in the region.

c. Cost Effectiveness:

1. Annual cost for vehicle operations and maintenance (including salaries, fuel, maintenance, administrative expenses related to system, and all other operating costs): \$360,000, including leasing costs
2. Average annual number of riders: 55,000/year
3. Transportation fee or fares recovered (average): \$360,000/year
4. Useful life of transportation assets: 12 years

Annual cost per passenger trip: This will be automatically calculated by FTA.

Annual fare box recovery This will be automatically calculated by FTA. %

d. Partnering, funding from other sources:

This proposal is predicated on the new partnership between Eastern Sierra Transit Authority and the Inyo National Forest and Devils Postpile National Monument. ESTA is the federally recognized local transit authority and is a joint powers authority and partnership representing Inyo and Mono Counties, the city of Bishop, and the Town of Mammoth Lakes, and brings significant transit expertise where it had been lacking. The Reds Meadow Shuttle service is one of the largest transit operations in the Eastern Sierra and will provide important cornerstone for ESTA's continued success and growth in the region. The purchase of new buses for ESTA to use for the Reds Meadow Shuttle system will have positive repercussions not just for the 100,000 visitors to Reds Meadow Valley, but also for Eastern Sierra residents and the millions of visitors to the area.



United States Department of the Interior

NATIONAL PARK SERVICE
Devils Postpile National Monument
P. O. Box 3999
Mammoth Lakes, California 93546
760-934-2289



L3217

February 24, 2009

Office of Program Management, Paul S. Sarbanes Transit in the Parks
Federal Transit Administration
1200 New Jersey Ave., SE.;
E44-417;
Washington, DC 20590

To Whom It May Concern:

I am writing to offer our full support of the Inyo National Forest's Transit in the Parks grant application for the purchase of buses for the Reds Meadow/Devils Postpile National Monument shuttle service. The Devils Postpile National Monument and the Inyo National Forest have worked closely together for the last 30 years to provide a high quality shuttle service for visitors. Surveys consistently show that visitors are extremely pleased with this service.

However, as a partner in this operation, we have witnessed first-hand the challenges in making the shuttle operation sustainable and affordable to visitors. The Park Service, along with the Inyo National Forest, has supported extensive study of the Reds Meadow/Devils Postpile shuttle to find a long term, sustainable solution. The efforts of these studies are finally bearing fruit. Starting in 2009, the Inyo National Forest and the Devils Postpile National Monument are embarking on a new model for operating the Reds Meadow Shuttle by partnering with our local transit authority, ESTA (Eastern Sierra Transit Authority). ESTA will begin operating the Reds Meadow shuttle this coming field season, and begin to provide the seamless transportation system that we all have been working toward here in the Eastern Sierra.

The success of this grant will help ensure this new partnership with ESTA is long lasting. Contracting and leasing of buses is unsustainable: there are few options for short term operations, even fewer options with buses that are appropriate for the difficult operating environment of the high Sierra, and costs are challenging to predict. Purchased buses will also improve the visitor experience and support ESTA as they begin discussions with Mammoth Mountain Ski Area to begin operating their winter shuttle service.

In closing, this grant application is an extremely important step in our efforts to create a sustainable and affordable shuttle operation in Reds Meadow and the Devils Postpile National Monument, and it has our full support.

Sincerely,

/s/ Deanna M. Dulen
Superintendent



United States
Department of
Agriculture

Forest
Service

Inyo National Forest

351 Pacu Lane, Suite 200
Bishop, CA 93514
(760) 873-2400
(760) 873-2538 TDD

File Code: 2300

Date: June 25, 2010

Floyd Thompson
U.S. Forest Service
1400 Independence Avenue, S.W.
Washington, DC 20250-1101

Dear Mr. Thompson,

I am writing to express my full support for the Eastern Sierra Transit's *Transit in the Parks* application of \$3.2 million for the purchase of eight (8) new, low-floor, handicapped-accessible buses for the Reds Meadow/Devils Postpile Shuttle. As an independent analysis by David Evans & Associates indicates, the grant funded purchase of new buses for this operation is the most effective and operationally appropriate option over the long run that will ensure the continuation of the Reds Meadow/Devils Postpile Shuttle.

The partnership between the Inyo National Forest, Devils Postpile National Monument and Eastern Sierra Transit was wildly successful in its first year and has even greater potential to draw in all Eastern Sierra transit operations under one name in the future. The only way the Forest Service can ensure that this partnership remains viable over the long-term and continue to build momentum toward a truly seamless regional transit system, is to provide the up-front investment in rolling stock through the *Transit in the Parks* program. This grant will complete that commitment.

I thank you for your time and consideration. If you have any questions or need additional information, please feel free to contact me.

Sincerely,

/s/ Jim Upchurch
JIM UPCHURCH
Forest Supervisor

cc: Matt B Peterson



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